



|                 |               |
|-----------------|---------------|
| WEAR            | <b>NORMAL</b> |
| CONTAMINATION   | <b>NORMAL</b> |
| FLUID CONDITION | <b>NORMAL</b> |



Machine Id  
**653M**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2    |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number  |     | Client Info |           | <b>GFL0107690</b>  | GFL0096582  | GFL0082732  |
| Sample Date    |     | Client Info |           | <b>11 Jan 2024</b> | 13 Oct 2023 | 28 Jul 2023 |
| Machine Age    | hrs | Client Info |           | <b>10437</b>       | 9849        | 9247        |
| Oil Age        | hrs | Client Info |           | <b>600</b>         | 600         | 600         |
| Filter Age     | hrs | Client Info |           | <b>600</b>         | 600         | 600         |
| Oil Changed    |     | Client Info |           | <b>Changed</b>     | Changed     | Changed     |
| Filter Changed |     | Client Info |           | <b>Changed</b>     | Changed     | Changed     |
| Sample Status  |     |             |           | <b>NORMAL</b>      | NORMAL      | NORMAL      |

**WEAR**

All component wear rates are normal.

|              |        |             |      |              |      |      |
|--------------|--------|-------------|------|--------------|------|------|
| Iron         | ppm    | ASTM D5185m | >120 | <b>12</b>    | 10   | 8    |
| Chromium     | ppm    | ASTM D5185m | >20  | <b>&lt;1</b> | <1   | 0    |
| Nickel       | ppm    | ASTM D5185m | >5   | <b>&lt;1</b> | <1   | 0    |
| Titanium     | ppm    | ASTM D5185m | >2   | <b>0</b>     | <1   | <1   |
| Silver       | ppm    | ASTM D5185m | >2   | <b>0</b>     | 0    | 0    |
| Aluminum     | ppm    | ASTM D5185m | >20  | <b>2</b>     | 3    | 2    |
| Lead         | ppm    | ASTM D5185m | >40  | <b>0</b>     | <1   | 0    |
| Copper       | ppm    | ASTM D5185m | >330 | <b>1</b>     | 3    | 1    |
| Tin          | ppm    | ASTM D5185m | >15  | <b>&lt;1</b> | <1   | 0    |
| Vanadium     | ppm    | ASTM D5185m |      | <b>&lt;1</b> | <1   | <1   |
| White Metal  | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | NONE |
| Yellow Metal | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | NONE |

**CONTAMINATION**

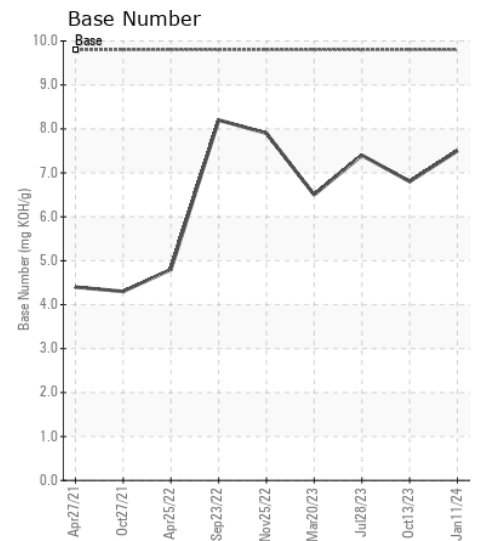
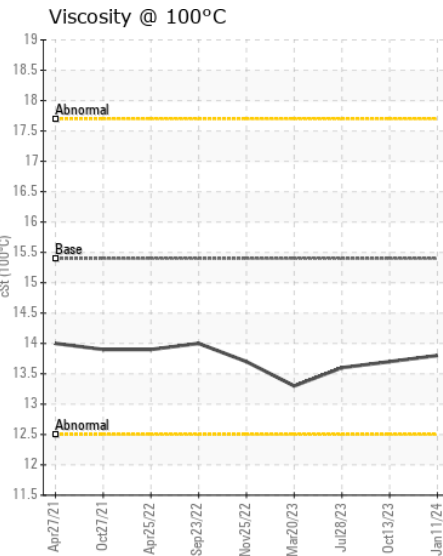
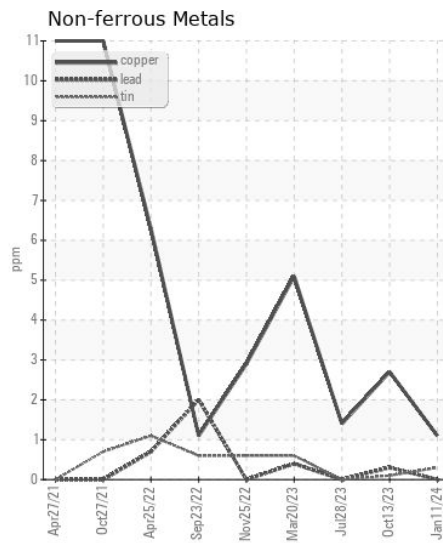
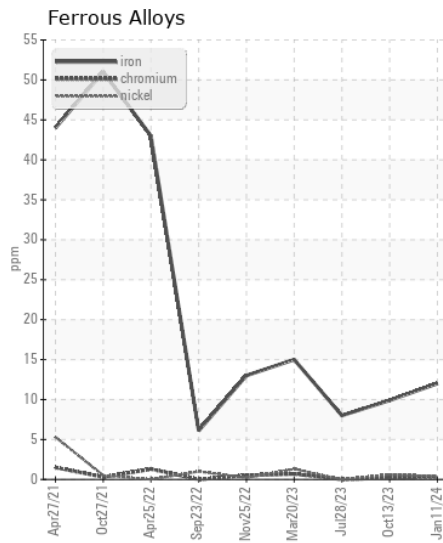
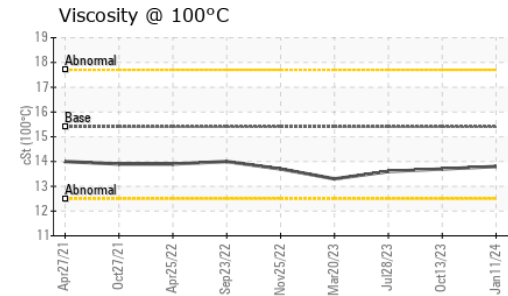
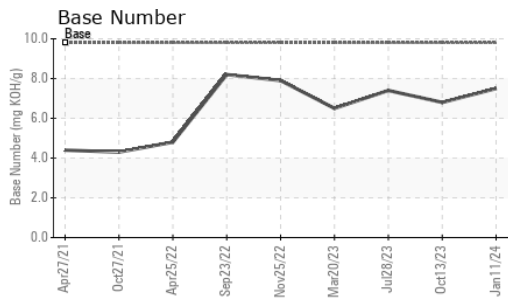
There is no indication of any contamination in the oil.

|                  |          |             |       |                |       |       |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon          | ppm      | ASTM D5185m | >25   | <b>6</b>       | 3     | 2     |
| Potassium        | ppm      | ASTM D5185m | >20   | <b>&lt;1</b>   | 2     | 0     |
| Fuel             |          | WC Method   | >3.0  | <b>&lt;1.0</b> | <1.0  | <1.0  |
| Water            |          | WC Method   | >0.2  | <b>NEG</b>     | NEG   | NEG   |
| Glycol           |          | WC Method   |       | <b>NEG</b>     | NEG   | NEG   |
| Soot %           | %        | *ASTM D7844 | >4    | <b>0.5</b>     | 0.7   | 0.6   |
| Nitration        | Abs/cm   | *ASTM D7624 | >20   | <b>7.5</b>     | 8.6   | 8.2   |
| Sulfation        | Abs/.1mm | *ASTM D7415 | >30   | <b>19.2</b>    | 20.8  | 19.9  |
| Silt             | scalar   | *Visual     | NONE  | <b>NONE</b>    | NONE  | NONE  |
| Debris           | scalar   | *Visual     | NONE  | <b>NONE</b>    | NONE  | NONE  |
| Sand/Dirt        | scalar   | *Visual     | NONE  | <b>NONE</b>    | NONE  | NONE  |
| Appearance       | scalar   | *Visual     | NORML | <b>NORML</b>   | NORML | NORML |
| Odor             | scalar   | *Visual     | NORML | <b>NORML</b>   | NORML | NORML |
| Emulsified Water | scalar   | *Visual     | >0.2  | <b>NEG</b>     | NEG   | NEG   |

**FLUID CONDITION**

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

|                  |          |             |      |              |      |      |
|------------------|----------|-------------|------|--------------|------|------|
| Sodium           | ppm      | ASTM D5185m |      | <b>7</b>     | 9    | 5    |
| Boron            | ppm      | ASTM D5185m | 0    | <b>&lt;1</b> | 2    | <1   |
| Barium           | ppm      | ASTM D5185m | 0    | <b>0</b>     | <1   | 0    |
| Molybdenum       | ppm      | ASTM D5185m | 60   | <b>60</b>    | 62   | 57   |
| Manganese        | ppm      | ASTM D5185m | 0    | <b>&lt;1</b> | 0    | <1   |
| Magnesium        | ppm      | ASTM D5185m | 1010 | <b>1019</b>  | 930  | 945  |
| Calcium          | ppm      | ASTM D5185m | 1070 | <b>1062</b>  | 1096 | 1063 |
| Phosphorus       | ppm      | ASTM D5185m | 1150 | <b>1058</b>  | 935  | 922  |
| Zinc             | ppm      | ASTM D5185m | 1270 | <b>1294</b>  | 1263 | 1193 |
| Sulfur           | ppm      | ASTM D5185m | 2060 | <b>2951</b>  | 2758 | 2853 |
| Oxidation        | Abs/.1mm | *ASTM D7414 | >25  | <b>15.0</b>  | 17.0 | 16.0 |
| Base Number (BN) | mg KOH/g | ASTM D2896  | 9.8  | <b>7.5</b>   | 6.8  | 7.4  |
| Visc @ 100°C     | cSt      | ASTM D445   | 15.4 | <b>13.8</b>  | 13.7 | 13.6 |



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0107690 **Received** : 18 Jan 2024  
**Lab Number** : 06064850 **Diagnosed** : 19 Jan 2024  
**Unique Number** : 10836232 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 465 - Pontiac**  
 888 Baldwin  
 Pontiac, MI  
 US 48340

Contact: Ricky Matthews  
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F:

To discuss this sample report, contact Customer Service at 1-800-237-1369.

\* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)